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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,153	LEE, HENRI	
	Examiner	Art Unit	
	Jason P. Salce	2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 3/18/2009 have been fully considered but they are not persuasive.

Applicant has amended independent claim 16 to recite, "***a twisted pairs network comprising two pairs of twisted wires***". Goodman discloses a twisted pairs network comprising two pairs of twisted wires (**see Figure 16 and Column 17, Lines 32 through Column 18, Line 4 for the system of Goodman using a 100BaseT4 device to process signals from two pairs of UTP/pairs of wires**).

Applicant has also amended independent claim 16 to recite, "***wherein a different pair of the twisted pairs network is a distribution pair that routes multiplexed processed signals from the central processing and multiplexing unit to the receivers***". Fenouil teaches that a different pair of the twisted pairs network is a distribution pair that routes multiplexed processed signals from the processing and multiplexing unit to the receivers (**see Figure 4 and Column 8, Line 66 through Column 9, Line 8 for receiving the processed audio and control signals (*see Column 10, Line 47 through Column 11, Line 17 for processing a video signal before transmission*) from hub 100 on pins 3 and 6 of the (*two pairs of twisted wires*) and therefore teaches a different pair used for distributing processed signals from the hub 100/processing and multiplexing unit (*further note Column 10, Lines 53-61 for the analog video signal being routed through a twisted pair termination device 350, which has been described in Figures 9-11, wherein at*

Column 10, Lines 28-32 for the twisted pair termination device 350 includes circuitry to multiplexed the incoming analog video signals)).

Applicant has also amended independent claim 16 to recite, "***wherein the service pair carries up signals, the up signals being the sources signals derived from the sources and the control signals***". Fenouil teaches that the service pair carries up signals, the up signals being the sources signals derived from the sources and the control signals (**see Figure 12 and Column 11, Line 18 through Column 12, Line 67 for the audio (*source signals*) and control signals (*remote control signals*) being sent upstream from one client device to another, wherein the up signals being derived from the source device that generates the audio signals injected on line 420 in Figure 12 and further transmitted in response to a remote control request from another client device (*specifically note Column 12, Lines 6-54*)**).

Applicant has also amended independent claim 16 to recite, "***wherein the distribution pair carries down signals, the down signals being the multiplexed processed signals***". Fenouil teaches that the distribution pair carries down signals, the down signals being the multiplexed processed signals (**see Column 10, Line 47 through Column 11, Line 17 for sending down signals in the form of a video signal through the network (*see above for the video signal being multiplexed*)**).

Applicant has also amended independent claim 16 to recite, "***the up signals and the down signals are carried separately by the service pair and the distribution pair, respectively***". Fenouil teaches that the up signals and the down signals are carried separately by the service pair and the distribution pair, respectively (**see Figure**

12 for the up signals and down signals being carried separately by the service pair 420/428/422/424/426/452/456/460 and the distribution pair 400/410, respectively).

Applicant has added new claims 17-26. See the updated rejection below addressing these claims.

Claim Rejections - 35 USC § 112

Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 states, "***the twisted pairs network comprises only of the two pairs of twisted wires***". The claim fails to state how many pairs comprise the twisted pairs network.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 2-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman (U.S. Patent No. 6,192,399) in view of Fenouil (U.S. Patent No. 6,240,554).

Referring to claim 16, Goodman discloses video signal sources (**see Figure 9 and Column 11, Lines 4-16 for hub 800 receiving a plurality of television signals (*sources*) from video source 820**).

Goodman also discloses video signal receivers (**see televisions 154 in Figures 2-3**).

Goodman also discloses a central processing and multiplexing unit (**see Figure 9 and Column 10, Lines 66 through Column 11, Line 39 for hub 800 processing and multiplexing signals**).

Goodman also discloses a twisted pairs network comprising two pairs of twisted wires (**see Figure 16 and Column 17, Lines 32 through Column 18, Line 4 for the system of Goodman using a 100BaseT4 device to process signals from <u>two pairs of twisted wires</u>**).

Goodman fails to teach that one pair of the twisted pairs network is a service pair that routes source signals and control signals to the central processing and multiplexing unit and that a different pair of the twisted pairs network is a distribution pair that routes processed signals from the processing and multiplexing unit to the receivers.

Fenouil also discloses a twisted pairs network comprising two pairs of twisted wires (**see Figure 12 for the twisted pairs network having one service pair 420/428 and one distribution pair 400/410**), wherein one pair of the twisted pairs network is a service pair that routes source signals and control signals to the central processing and

multiplexing unit (**see Figure 4 and Column 8, Lines 66 through Column 9, Line 8 for transmitting audio source signals and control signals on pins 1 and 2 of the (*four pair*) twisted pair network to hub 100 in Figure 4 and therefore clearly teaches a service pair that routes/transmits source (*audio*) and control signals to the hub 100/central processing and multiplexing device**) and that a different pair of the twisted pairs network is a distribution pair that routes multiplexed processed signals from the processing and multiplexing unit to the receivers (**see Figure 4 and Column 8, Line 66 through Column 9, Line 8 for receiving the processed audio and control signals (*see Column 10, Line 47 through Column 11, Line 17 for processing a video signal before transmission*) from hub 100 on pins 3 and 6 of the (*two pairs of twisted wires*) and therefore teaches a different pair used for distributing processed signals from the hub 100/processing and multiplexing unit (*further note Column 10, Lines 53-61 for the analog video signal being routed through a twisted pair termination device 350, which has been described in Figures 9-11, wherein at Column 10, Lines 28-32 for the twisted pair termination device 350 includes circuitry to multiplexed the incoming analog video signals*)**).

Fenouil teaches that the service pair carries up signals, the up signals being the sources signals derived from the sources and the control signals (**see Figure 12 and Column 11, Line 18 through Column 12, Line 67 for the audio (*source signals*) and control signals (*remote control signals*) being sent upstream from one client device to another, wherein the up signals being derived from the source device that generates the audio signals injected on line 420 in Figure 12 and further**

transmitted in response to a remote control request from another client device (*specifically note Column 12, Lines 6-54*)).

Fenouil teaches that the distribution pair carries down signals, the down signals being the multiplexed processed signals (**see Column 10, Line 47 through Column 11, Line 17 for sending down signals in the form of a video signal through the network (*see above for the video signal being multiplexed*)**).

Fenouil teaches that the up signals and the down signals are carried separately by the service pair and the distribution pair, respectively (**see Figure 12 for the up signals and down signals being carried separately by the service pair 420/428/422/424/426/452/456/460 and the distribution pair 400/410, respectively**).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the twisted pairs network, as taught by Goodman, using the routing functionality that allows source signals to be transmitted back to a central processing and multiplexing unit, as taught by Fenouil, for the purpose of providing a bi-directional transmission of video bandwidth signals which is very versatile while also being very cost effective (**see Column 1, Lines 64-67 of Fenouil**).

Referring to claim 2, Goodman also discloses a means of inputting control signals that can be routed on the service network (**see remote control 834 in Figure 8 and Column 12, Lines 20-40 for sending a control signal from remote control 834 to video converter 920, wherein the control signal transmitted from the remote control must be transmitting over UTP 810 in Figures 9-11**).

Referring to claim 3, Goodman also discloses connection means on which signal sources can be connected to send signals and to receive control signals that can be routed on the service network (**see wiring block 805 in Figure 8 and Column 12, Lines 20-40 for sending a control signal from remote control 834 to video converter 920, wherein the control signal transmitted from the remote control must be transmitting over UTP 810 (*through wiring block 805*) in Figures 8-11**).

Referring to claim 4, Goodman also discloses including input modulators associated with corresponding connection means to modulate signals to be routed on the service network (**see control modulator 1060 for set-top box 832, where multiple set top box exist in the system (see Figures 8 and 10) and video modulator 1034 in Figure 10 for modulating signals to be routed on both UTP networks 806 and 810**). **The examiner notes that since the input modulators transmit and receive signals through hub 800 and wiring block 805 in Figure 8 that the input modulators are associated with corresponding connection means (*wiring block 805 in Figure 8*)).**

Referring to claim 5, Goodman also discloses cable terminals (**see set top boxes in Figure 8**) on which a coaxial cable leading to a TV receiver can be connected (**see the connection 1092 from set-top box 832 to television 154 in Figure 10 for a**

set-top terminal connected to a television which can allow a TV receiver to be connected via a coaxial cable).

Goodman fails to teach that the terminals connecting TV to the set-top box are coaxial cable terminals.

The examiner takes Official Notice to the fact that coaxial cable can connect a television to a set top box device.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the connection 1092 connecting a set-top box to a television in Figure 10 of Goodman, using a coaxial cable, as taught by the examiner's Official Notice, for the purpose of using pre-existing and commonly used terminals already installed in a set-top box and a television.

Referring to claim 6, Goodman also discloses adapters associated with terminals to adapt a processed signal output from the distribution network to be routed on a coaxial cable (**see HPF, video demodulator and NTSC modulator in set top box 832 in Figure 8 which allows a signal to be processed and distributed on a coaxial cable connected from a set-top box to a television**).

Goodman fails to teach that the terminals connecting TV to the set-top box are coaxial cable terminals.

The examiner takes Official Notice to the fact that coaxial cable can connect a television to a set top box device.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the connection 1092 connecting a set-top box to a television in Figure 10 of Goodman, using a coaxial cable, as taught by the examiner's Official Notice, for the purpose of using pre-existing and commonly used terminals already installed in a set-top box and a television.

Referring to claim 7, Goodman also discloses multiplexing means to multiplex control signals on the service network and to multiplex the modulated TV signals on the distribution network (**see Column 7, Line 63 through Column 8, Line 26 and Column 10, Lines 50-54 for multiplexing signals onto the UTP network 250, Column 12, Lines 34-47 for sending (*and combining through wiring block 805 and connection 807*) control signals (*video selections*) through UTP network/service network 806 and Column 12, Lines 48-55 for distributing the requested video signals over UTP 810 in Figure 10**).

Referring to claim 8, Goodman also discloses a processing unit to process the multiplexed modulated signals output from the service network so as to route them on the distribution network (**see Hub 800 in Figure 8 and Column 12, Lines 41-55 for distributing multiplexed modulated television signals over UTP 806 and 810 to set top boxes 832 in Figures 9-10**).

Referring to claim 9, Goodman also discloses processing means for individually processing the modulated signals output from the service network before routing them to multiplexing means (**see media converter components 1012a for processing the data, video and voice signals received over service network 121, 802, 804, and 806 before combining the signals by the multiplexing the signals for distribution over UTP distribution network 810 in Figures 8-12**).

Referring to claim 10, Goodman also discloses multiplexing means to multiplex the control signals output from the service network to reinject them onto the service network (**see wiring block 805 for accepting multiple signals from remote controls 834 and combining the remote control signals into a single output 807 back to hub 800 in Figure 8**).

Referring to claim 11, Goodman also discloses that the control signal input means includes a wave receiver associated with a remote control (**see remote control 834 in Figure 8 and IR receiver 1062 in Figure 10 for transmitting an IR signal from a remote control**).

Referring to claim 12, Goodman also discloses a box that includes input modulators associated with corresponding connection means to modulate signals output from sources (**see control modulator 1060 for set-top box 832, where multiple set top box exist in the system (see Figures 8 and 10) and video**

modulator 1034 in Figure 10 for modulating signals to be routed on both UTP networks 806 and 810). **The examiner notes that since the input modulators transmit and receive signals through hub 800 and wiring block 805 in Figure 8 that the input modulators are associated with corresponding connection means (*wiring block 805 in Figure 8*)**), output adapters associated with corresponding terminals to adapt the signal output from the distribution network (**see HPF, video demodulator and NTSC modulator in set top box 832 in Figure 8 which allows a signal to be processed and distributed on a coaxial cable connected from a set-top box to a television**), means of inputting control signals that can be routed on the service network (**see remote control 834 in Figure 8 and Column 12, Lines 20-40 for sending a control signal from remote control 834 to video converter 920, wherein the control signal transmitted from the remote control must be transmitting over UTP 810 in Figures 9-11**), connection means onto which signal sources can be connected to send video signals) and to received control signals on the service network (**see wiring block 805 in Figure 8 and Column 12, Lines 20-40 for sending a control signal from remote control 834 to video converter 920, wherein the control signal transmitted from the remote control must be transmitting over UTP 810 (*through wiring block 805*) in Figures 8-11**), cable terminals (**see set top boxes in Figure 8**) to which a coaxial cable connecting to a TV receiver can be connected (**see the connection 1092 from set-top box 832 to television 154 in Figure 10 for a set-top terminal connected to a television which can allow a TV receiver to be connected via a coaxial cable**) and means of connection to the distribution network

and the service network (**see HPF 1064 and control modulator 1060 in Figure 10 and Hub 800 in Figure 8**).

Goodman fails to teach that the terminals connecting TV to the set-top box are coaxial cable terminals.

The examiner takes Official Notice to the fact that coaxial cable can connect a television to a set top box device.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the connection 1092 connecting a set-top box to a television in Figure 10 of Goodman, using a coaxial cable, as taught by the examiner's Official Notice, for the purpose of using pre-existing and commonly used terminals already installed in a set-top box and a television.

Referring to claim 13, Goodman also discloses that the distribution network and the service network are formed from a single previously installed network of cables consisting of twisted wire pairs (**see Column 4, Lines 8-15 and Figure 2**).

Referring to claim 14, Goodman also discloses that the multiplexing means are also connected to external video signal sources processed later in the processing unit so that they can be transferred onto the distribution network (**see main information interface 200 and television distribution system that sends signals to video source 820 in Figure 8 and video source suites 3014 connected to video source controller 3010 and NxM switch 3012 in Figure 30a**).

Referring to claim 15, Goodman also discloses that the external sources include antennas and/or satellite terminals (**see Column 30, Lines 15-18**).

Referring to claim 17, Fenouil discloses that the service pair and the distribution pair carry both audio and video type signals (**see Figure 12 and the rejection of claim 16 for the service pair carrying audio signals and the distribution pair carrying video signals, therefore the service pair and the distribution pair together carry both audio and video type signals**).

Referring to claim 18, Fenouil discloses that each signal source and each receiver are connected to the central processing and multiplexing unit via the twisted pairs network comprising the two pairs of twisted wires (**see Figure 12 for Users 102C1 and 102C2 being connected to the central processing and multiplexing unit 100C through the twisted pair connections**).

Referring to claim 19, Fenouil discloses that the twisted pairs network comprises only of the two pairs of twisted wires (**see Figure 12**).

Referring to claim 20, Fenouil discloses that each signal source and each signal receiver are directly connected to the central processing and multiplexing unit via the twisted pairs network comprising the two pairs of twisted wires (**see Figure 12 for**

Users 102C1 and 102C2 being connected to the central processing and multiplexing unit 100C through the twisted pair connections).

Referring to claim 21, Fenouil discloses that the service pair carries the control signals input from a control signal input means corresponding to a signal receiver to a signal source through the central processing and multiplexing unit (**see Figure 12 for carrying a control signal from IR 422 of User 102C1 over twisted pair line 430 to the central processing and multiplexing unit 100C to User 102C2**) , and carries a source signal from a signal source to the central processing and multiplexing unit (**see Figure 12 and Column 11, Line 18 through Column 12, Line 54 for User 102C2 responding to the control signal by sending audio, video or data signal back to User 102C1 through the central processing and multiplexing unit 100C**).

Fenouil also discloses that the distribution pair carries the multiplexed processed signal, the multiplexed processed signal derived from the received source signal in the central processing and multiplexing unit, from the central processing and multiplexing unit to the corresponding signal receiver (**see Figure 12 and Column 10, Line 34 through Column 11, Line 16 for carrying the multiplexed (*see the rejection of claim 16*) processed video signal from User 102C2, through the central processing and multiplexing unit 100C, to User 102C1 or vice versa**).

Referring to claim 22, Fenouil discloses input modulators which modulate the source signals output in a base band frequency from the signal courses to modulated

source signals compatible with transmission on the service pair and distribution pair (**see Column 10, Line 34 through Column 12, Line 67 and modules 350, CPU and FC in Figure 12 which all modulate signal sources to be transmitted over the twisted pair network**).

Fenouil also discloses that the service pair carries the modulated source signal from the signal source to the central processing and multiplexing unit (**see Figure 12 for sending the modulated signal over the service pair 420 to the central processing and multiplexing unit 100C**).

Referring to claim 23, Fenouil discloses that the input modulators modulate the source signals output in a base band frequency from the signal sources to modulated source signals compatible with transmission on the service pair and distribution pair (**see Column 10, Line 34 through Column 12, Line 67 and modules 350, CPU and FC in Figure 12 which all modulate signal sources to be transmitted over the twisted pair network**).

Referring to claim 24, Fenouil discloses that the control signal input means corresponds to a receiver which is designated for receiving the processed signals from the central and multiplexing unit (**see Figure 12 for user 102C2 receiving a control signal from user 102C1 over line 450 from the central and multiplexing unit 100C**).

Referring to claim 25, Fenouil discloses that the up signals and the down signals are not carried by a same pair of twisted wires of the service pair and distribution pair (**see Figure 12 and the rejection of claim 16 for the up signals and down signals carried by different pairs of twisted wires (*400/410 for the video signals and 420-456 for the up signals*)**).

Referring to claim 26, Fenouil discloses that the service pair does not carry the down signals and the distribution pair does not carry the up signals (**see the rejection of claim 16 which specifies that the service pair carries up signals and the distribution pair carries down signals**).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason P. Salce whose telephone number is (571) 272-7301. The examiner can normally be reached on M-F 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason P Salce/
Primary Examiner, Art Unit 2421

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July 5, 2009